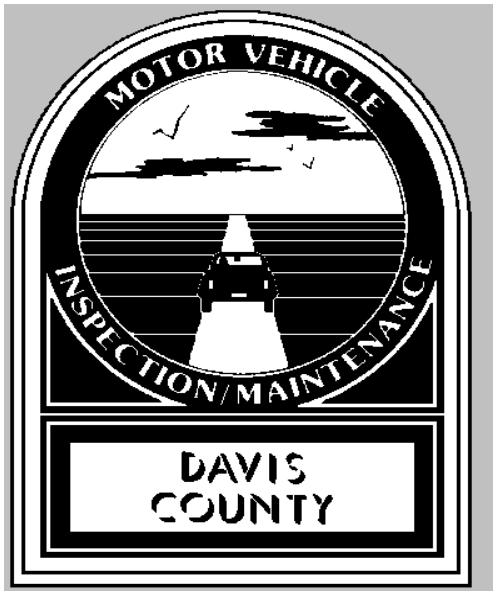
Davis County, Utah
Inspection/Maintenance Program
2013 Program Report



July 29, 2014

Response to 40 CFR Part 51 – Subpart S
Inspection/Maintenance Program Requirements
51.366 Data Analysis and Reporting Requirements

40 CFR Part 51 - Subpart S Inspection/Maintenance Program Requirements
51.366 - Data Analysis and Reporting Requirements

Reporting Requirement	Reviewer Comments / Location in State Report	Has State Met Requirement
(a) <u>Test Data Report</u> **The program shall submit to EPA by July of each year a report providing basic statistics on the testing program for January through December of the previous year, including:**		
(1) The number of vehicles tested by model year and vehicle type;	**230,736 TOTAL NUMBER OF TEST W/RETESTS** **188,357 PASSING** **26,808 FAILING** **15,529 ABORTED** **193,277 Total Vehicles Tested (INITIAL)** **20,357 Total Failures 10.53%** Decentralized Program (See additional reports, #(2) i Initial Emission Inspection Failures by Test Type, Model Year and Vehicle Type .)	

The number of vehicles tested by test type: **Total OBD Vehicles Tested** **Decentralized Program Includes Diesel Vehicles**	**158,405 Total OBDII Vehicles Tested** **14,292 Total Failures 9.02%** **82 % of Total Vehicles Initially Tested were OBDII (193,277)** **Decentralized Program** Sedan Station Wagon Pickup SUV Minivan Full Size Van Heavy Duty --- **27,598 Total TSI Vehicles Tested** **4547 Total Failures 16.48 %** **14 % of Total Vehicles Initially Tested were TSI (193,277)** **Decentralized Program** Sedan Station Wagon Pickup	

	SUV Minivan Full Size Van Heavy Duty **7,274 Total Diesel Vehicles Tested** **5647 Dyno Load Test** **1347 Total Failures 23.85% Failure Rate** **Centralized Program** **1627 Snap Idle test J 1667** **171 Total Failures 10.5% Failure Rate** **4.0 % of Total Vehicles Tested were Diesel (193,277)** (See additional reports Davis 2013 – Question 1 report # (2) i for details by model year and vehicle type.)	
(2) By model year and vehicle type, the number and percentage of vehicles:		
(i) Failing initially, per test type;	**193,277 Total Vehicles Tested** **20,357 Total Vehicles Failed Initial Test** **10.53 % of Total Vehicles Initially Tested**	

158,405 Initial OBD II tests

Total OBD II Tests 82 % of Total tests

14,292 Total OBD II Initial Failures

9.02 % OBD II Initial Fail Rate

70 % of Total Initial Vehicle Failures

27,598 Total TSI Tests 14 % of Total tests (193,277)

4,547 Total TSI Initial Failures 16.48 % Initial Fail

22 % of Total Initial Vehicle Failures (20,357)

2 % TSI Initial Fail Rate (193,277)

7,274 Total Diesel Tests 4 % of Total Tests (193,277)

1,518 Total Diesel Failures 7.0 % of Total (20,357)

21.0 % Diesel Initial Fail Rate (7,274)

1 % of Total Initial Vehicle Failures (193,277)

Light Duty Diesel J1667

5,647 Initial Dyno Tests 1347 Initial Failures

3.0 % of Total Tests (193,277)

1,347 7 % of Total Initial Vehicle Failures (20,357)

89 % of Total Diesel Initial Vehicle Failures (1,347)

24 % Light Duty Diesel Initial Fail Rate (5,647)

Heavy Duty Diesel (Snap test)

1,627 Initial HD Snap Tests 171 Initial Failures

1.0% of Total Tests (193,277)

171 1.0 % of Total Initial Vehicle Failures (20,357)

11 % of Total Diesel Initial Vehicle Failures (1,518)

11 % Heavy Duty Diesel Initial Fail Rate (1,627)

(See additional report, Davis 2013 Question 2 i Vehicles Failing Initially)

(ii) Failing the first retest per test type;	**20,807 Vehicles Failing First Retest by Test Type** **6277 Failures** **30.17 % of Vehicles Tested Failed the First Retest** --- **13,834 OBD II Total Tests** **3,676 Total OBDII Vehicles Failed the First Retest** **26.57% OBDII Fail Rate** **18% of First Retest Failures were OBDII (20,807)** **5,332 Total TSI Tests** **1,983 Total TSI Vehicles Failed the First Retest** **37 % TSI Fail Rate (5332)** **10 % of First Retest Failures were TSI (20,807)**	

	1641 Total DIESEL Tests **618 Total Diesel Vehicles Failed the First Retest** **37.66 % Diesel Fail Rate** **3% of First Retest Failures were Diesel (20,807)** (See additional report, Davis 2013 Question 2 ii Vehicles Failing Initially)	
(iii) Passing the first retest per test type;	**14,530 Vehicles Passing First Retest by Test Type (20,807) TOTAL TESTS** **70 % of Total Vehicles Passing the First Retest** **10,158 Total OBDII Vehicles Passed the First Retest** **73 % of OBDII Vehicles Passed the First Retest** **(13,834)** **70 % of Vehicles Passing First Retest were OBDII** **(14,530)**	

3,349 Total TSI Vehicles Passed the First Retest

5332 Total tests 1983 Failures

63 % TSI Vehicles passed the First Retest

21 % of Vehicles passing the First Retest were TSI (14,530)

1,641 Total Diesel Vehicles Tested

1,023 Passed the First Retest

62 % of Diesel Vehicles Passed the First Retest

7 % of Vehicles Passing the First Retest were Diesel (14,530)

(See additional report, Davis 2013 Question 2 iii Vehicles Passing the First Retest)

(iv) Initially failed vehicles passing the second or subsequent retest per test type; Our contractor, Worldwide Environmental, does not track the failures by 2nd, 3rd etc. failures. We have some generalized failure numbers for subsequent retests.		

(v) Initially failed vehicles receiving a waiver; and	60 Day Waiver 2 90 Day Waiver 4 1 Year Waiver 9 Pending 7 (did not follow thru with paperwork etc.)	
(vi) Vehicles with no known final outcome (regardless of reason)	Initial Tests 193,277 Retests 20,807 Total 214,084 6,277 vehicles with no known final outcome 3% of total Tests (214,084) (see Report # 17)	
(xi)Passing the On-board diagnostic check	**Vehicles Passing the on-board diagnostic check** **Total tested / Initial Tests / Retests / Total Passing / % Pass** **172,239 / 158,405 / 13,834 / 154,271 / 90%**	
(xii) Failing the on-board diagnostic check;	**14,292 Vehicles Failing the OBD Test** **70 % Of Total Failed Vehicles Tested (20,357)** **9 % Of Total OBD Vehicles Tested (158,405)**	

	(See additional report Davis 2013– Question (2 xii) Vehicles Passing/ Failing the On-Board Diagnostic Test for details)	
(xiii) Failing the on-board diagnostic check and passing the tailpipe test (if applicable);	N/A	
(xiv) Failing the on-board diagnostic check and failing the tailpipe test (if applicable);	N/A	
(xv) Passing the on-board diagnostic check and failing the I/M gas cap evaporative system test (if applicable);	SEE REPORT (xv) **TOTAL FAIL % FAIL** **54,973 954 1.74%**	
(xvi) Failing the on-board diagnostic check and passing the I/M gas cap evaporative system test (if applicable);	SEE REPORT (xvi) **TOTAL FAIL % FAIL** **54,973 5410 9.84%**	
(xvii) Passing both the on-board diagnostic check and I/M gas cap evaporative system test (if applicable);	SEE REPORT (xvii) **TOTAL PASS % PASS** **54,973 32,397 58.93%**	
(xviii) Failing both the on-board diagnostic check and I/M gas cap evaporative system test	SEE REPORT (xviii)	

(if applicable);	**TOTAL FAIL % FAIL** **54,973 223 0.41%**	
(xix) MIL is commanded on and no codes are stored; (xix)	**TOTAL MIL ON /NO CODES % MIL ON** **5446 344 6.32%** (See additional report Davis 2013 – Question (2 xix) MIL is commanded on and no codes are stored for details)	
(xx) MIL is not commanded on and codes are stored;	**TOTAL MIL OFF W / CODES %** **166,289 12,283 7.39%**	

	(See additional report Davis 2013 – Question (2 xx) MIL is not commanded on and codes are stored for details)	
(xxi) MIL is commanded on and codes are stored;	**TOTAL Vehicles with MIL On and DTCs stored %** **5446 5102 93.6 8%** See additional report Davis 2013 – Question (2xxi) MIL is commanded on and codes are stored for details)	
(xxii) MIL is not commanded on and codes are not stored;	**TOTAL MIL Off and No DTCs %** **166,289 154,006 92.61%** (See additional report Davis 2013 – Question (2 xxii) MIL is not commanded on and codes are not stored for details)	

(xxiii) Readiness status indicates that the evaluation is not complete for any module supported by on-board diagnostic systems;	**TOTAL Vehicles Not Ready %** **171,665 10,854 6.32%** (See additional report Davis 2013 – Question (2 xxiii) Vehicles Failing the Readiness Status for details)	
(3) The initial test volume by model year and test station;	(3) The initial test volume by model year and test station. **See additional report Davis 2012 – Question 3 Initial Test Volume by Model Year and Test Station for details**	Report # 6
(4) The initial test failure rate by model year and test station; and	(4) The initial test failure rate by model year and test station. **See additional report Davis 2012 – Question 4 The Initial Test Failure Rate by Model Year and Test Station for details**	Report # 6
(5) The average increase or decrease in tailpipe emission levels for HC, CO, and NOX (if applicable) after repairs by model year and vehicle type for vehicles receiving a mass emissions test.	N/A	

(b) Quality assurance report. **The program shall submit to EPA by July of each year a report providing basic statistics on the quality assurance program for January through December of the previous year, including:**		
(1) The number of inspection stations and lanes:		
(i) Operating throughout the year; and	137 Stations Total; 144 Total Lanes; 134 Decentralized Stations with one lane each; Two Decentralized Stations with two lanes each. 103 Basic test Stations; 34 Repair Facilities	
(2) The number of inspection stations and lanes operating throughout the year:	137	
(i) Receiving overt performance audits in the year;	137 Stations received overt performance audits and 144 lanes received overt performance audits.	
(ii) Not receiving overt performance audits in the year;	0	
(iii) Receiving covert performance audits in the year;	56	

(iv) Not receiving covert performance audits in the year; and	81	
(v) That have been shut down as a result of overt performance audits;	0	
(3) The number of covert audits:		
(i) Conducted with the vehicle set to fail per test type;	All covert audits were for an OBDII type test, and all audits were conducted with the vehicle set to fail.	
(ii) Conducted with the vehicle set to fail any combination of two or more test types;	N/A	
(iii) Resulting in a false pass per test type;	N/A	
(iv) Resulting in a false pass for any combination of two or more test types;	Failed audit: 36 Passed audit: 13 Refused to test: 7 Total audits: 56 Due to the high occurrence of failures, the County opted for a retraining seminar that was mandatory for those failing the covert vehicle and a volunteer basis for others. We had about 80 technicians and supervisors attend the training course.	

(4) The number of inspectors and stations:		
(i) That were suspended, fired, or otherwise prohibited from testing as a result of covert audits;	0	
(ii) That were suspended, fired, or otherwise prohibited from testing for other causes; and	0	
(iii) That received fines;	1	
(5) The number of inspectors licensed or certified to conduct testing;	400	
(6) The number of hearings:	0	
(i) Held to consider adverse actions against inspectors and stations; and	0	
(ii) Resulting in adverse actions against inspectors and stations;	0	
(7) The total amount collected in fines from inspectors and stations by type of violation;	0	
(8) The total number of covert vehicles available for	3	

undercover audits over the year; and		
(9) The number of covert auditors available for undercover audits.	Staff	
(c) Quality control report **The program shall submit to EPA by July of each year a report providing basic statistics on the quality control program for January through December of the previous year, including:**		
(1) The number of emission testing sites and lanes in use in the program;	137 Stations Total; 144 Total Lanes; 134 Decentralized Stations with one lane each; Two Decentralized Stations with two lanes each;	
(2) The number of equipment audits by station and lane;	548 Total Overt Audits High Volume Stations assigned for monthly equipment audits, all receiving at least one audit per month. 1st Qtr / 2nd Qtr / 3rd Qtr / 4th Qtr Stations Audited: 115 / 150 / 150 / 150 Lanes Audited: 117 / 150 / 150 / 150 Monthly Audits: 40 / 50 / 50 / 50 Not Audited: 0 / 0 / 0 / 0 Low Volume Stations with one lane each, assigned quarterly equipment audits:	

	1st Qtr 2nd Qtr 3rd Qtr 4th Qtr Stations Audited: 297 297 297 297 Quarterly Audits: 99 99 99 99 Not Audited: 0 0 0 0 Station audits are performed on a monthly or quarterly basis. Not all stations were opened January thru December 2013. Some Stations opened and others closed mid year. The auditor has the option to perform data analysis for a two (2) to four (4) week period at the analyzer to see if anomalies are present. All audits require a gas calibration audit through the probe tip to assure accuracy. Auditors are encouraged to witness an actual I/M test while at the station. Any actions are taken on an "as needed" basis. The gas audit procedure includes a leak check, zero calibration, gas audit and station performance check. The 1,753 overt audits performed in 2013 do not include such actions as updating technician and station expiration dates and any other issue that would require a physical visit.	
(3) The number and percentage of stations that have failed equipment audits; and	Stations failed equipment audits 10 % Major item found was the flex probe needed replacing.	
(4) Number and percentage of stations and lanes shut down as a result of equipment audits.	Stations shut down as a result of equipment audits 0 % We require a 3 day calibration and a 24 leak check on the TSI analyzers. If an analyzer does not calibrate they call service to rectify the situation. Davis County does not track these occurances.	
(5) Additional Actions:	Station/Technician Violations Failure to Inspect: Pass a Failing Vehicle: Pass a Tampered Vehicle: Inaccurate/Incomplete Data: Improper Tampering Inspection: Actions	

	Suspension: Probation: Formal Warning: 60 Overt Verbal Warning: 0 <u>Other Actions - Analyzer</u> Failed Required Leak Test: 40 O2 Sensor Failure/Slow Response: 15 Audit Gas Calibration Failures: 4 Printer Problems: 20 Hose, Fittings, Filters: 25 Miscellaneous Items: 90 <u>On-Site Actions</u> Verbal Warnings: 52 Load/Void Certificates: 28 OBDII Issues: 22 No Communication Lockouts: 0 Analyzer Issues/Problems: 45 Technician/Station Permits: 145 <u>Other Activities</u> Waivers: 60 day 2 90 day 4 1 year 9 Pending 7 Undercover Covert Audits: 56 Failed audit: 36 Passed audit: 13 Refused to test: 7 Smoking Vehicle Complaints: 26 (Nov-DEC 2013 only) Covert Formal Warnings: 0	
(d) <u>Enforcement report</u>. **(1) All varieties of enforcement programs shall, at a**		

minimum, submit to EPA by July of each year a report providing basic statistics on the enforcement program for January through December of the previous year, including:		
(i) An estimate of the number of vehicles subject to the inspection program, including the results of an analysis of the registration data base;	Grand Total: 235,000 Total Vehicles Exempt due to State Legislation (Model Years 2008, 2010 & 2012): 41,588 Non-Exempt Vehicles: 193,277	
(ii) The percentage of motorist compliance based upon a comparison of the number of valid final tests with the number of subject vehicles;	We are unable to provide an answer at this time. There were 193,277 vehicles tested in Davis County in 2013. These vehicles were a combination of vehicles registered in all four Utah counties which have I/M programs, Weber, Davis, Salt Lake and Utah. Likewise, Davis County vehicles were tested in Weber, Salt Lake and Utah counties.	
(iii) The total number of compliance documents issued to inspection stations;	197,000 certificate numbers sold in 2013 Davis County residents are able to receive I/M tests in Weber, Salt Lake and Utah Counties, and certificate numbers issued to stations in 2013 that were unused in 2013 were available for use.	
(iv) The number of missing compliance documents;	Certificate of Compliance numbers are loaded into the Analyzer via the internet connection thru the VID, or input into the analyzer by the auditor, and assigned by the analyzer with each test used. There are no missing compliance documents.	
(v) The number of time extensions and other exemptions granted to motorists; and	TC 810 Out of State Registrations TC 810MC Out of State Heavy Duty Registrations TC 820 Out of County Vehicle Purchases Total	540 16 107 663

	1 time 1 Year Waivers	
(vi) The number of compliance surveys conducted, number of vehicles surveyed in each, and the compliance rates found.	N/A	
(2) Registration denial based enforcement programs shall provide the following additional information:		
(i) A report of the program's efforts and actions to prevent motorists from falsely registering vehicles out of the program area or falsely changing fuel type or weight class on the vehicle registration, and the results of special studies to investigate the frequency of such activity; and	When a suspect vehicle comes to our attention, we investigate it. We have no formal report to present. All fuel types and weight classes (1968 and newer gas, and all model years diesel vehicles) are inspected in Davis County.	
(ii) The number of registration file audits, number of registrations reviewed, and compliance rates found in such audits.	N/A. We would like suggestions of how to strengthen this aspect of our program.	
(3) Computer-matching based enforcement programs shall provide the following additional information:		
(i) The number and percentage of subject vehicles that were tested by the initial deadline, and by other milestones in the cycle;	N/A	

(ii) A report on the program's efforts to detect and enforce against motorists falsely changing vehicle classifications to circumvent program requirements, and the frequency of this type of activity; and	N/A	
(iii) The number of enforcement system audits, and the error rate found during those audits.	N/A	
(4) Sticker-based enforcement systems shall provide the following additional information:		
(i) A report on the program's efforts to prevent, detect, and enforce against sticker theft and counterfeiting, and the frequency of this type of activity;	N/A	
(ii) A report on the program's efforts to detect and enforce against motorists falsely changing vehicle classifications to circumvent program requirements, and the frequency of this type of activity; and	N/A	
(iii) The number of parking lot sticker audits conducted, the number of vehicles surveyed in each, and the	N/A	

noncompliance rate found during those audits.		
(e) <u>Additional reporting requirements</u>. **In addition to the annual reports in paragraphs (a) through (d) of this section, programs shall submit to EPA by July of every other year, biennial reports addressing:**		
(1) Any changes made in program design, funding, personnel levels, procedures, regulations, and legal authority, with detailed discussion and evaluation of the impact on the program of all such changes; and	Personnel levels have been reduced with the closing of our Centralized facility. With the addition of video at the analyzer we are viewing a great amount of the audits for compliance on a regular basis. When a question is raised we call the tech on the phone and advise them of what we are seeing. We are fine tuning our VIN mismatch program to readily find those tests that are really fraudulent by matching test results as well as PID counts. This year (2014) we were required by EPA to remove any mention of Diesel Opacity testing from or Ordinance which has been quite a challenge. The health benefits from our Diesel Program far outway any credits that EPA will not give us for this portion of our I/M Program.	
(2) Any weaknesses or problems identified in the program within the two-year reporting period, what steps have already been taken to correct those problems, the results of those steps, and any future efforts planned.	With a large number of failures with our undercover vehicle, the County decided to have a retraining seminar for those who failed to perform an accurate inspection on the covert vehicle. All technicians and stations were invited to attend in January of this year. We had a turnout of 80 technicians and station representatives at the seminar and we felt that it was a great success. We are currently in the process of setting up a new undercover vehicle and will shortly be sending it out for covert audits.	